

REMARKS/ARGUMENTS

The Examiner is thanked for the clarity and conciseness of the previous Office Action, and for the citation of references, which have been studied with interest and care.

This Amendment is in response to the Office Action mailed January 12, 2006. In the Office Action, claims 1, 6-15, 20-29, 34-43, and 48-55 stand rejected under 35 U.S.C. § 103.

Applicant has amended independent claims 1, 15, 29, and 43 to further clarify embodiments of the invention.

Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Rejection Under 35 U.S.C. § 103

Claims 1, 6-15, 20-29, 34-43, and 48-55 stand rejected under 35 U.S.C. § 103(a) as being allegedly obvious over U.S. Patent No. 5,905,713 issued to Anderson et al. (hereinafter Anderson) in view of U.S. Patent No. 5,408,465 issued to Gussella et al. (hereinafter Gussella) and further in view of U.S. Patent No. 6,580,452 issued to Gangitano (hereinafter Gangitano).

Applicant respectfully traverses the Office Action's §103 obviousness rejections in their entirety, in light of the following remarks. As stated in MPEP §2141.03:

A prima facie obviousness rejection requires the three basic criteria be met. First, there must be some teaching, suggestion, or motivation, either in the references of themselves, or in the knowledge generally available to one skilled in the art, to modify the reference or to combine the references. Second, there must be some reasonable expectation of success. Finally, the prior art reference, or references when combined, must teach all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the Applicant's disclosure. MPEP §2141.03. (Emphasis added).

MPEP §2141.03 further warns that *impermissible hindsight must be avoided*.

Furthermore, with regards to obviousness, as aptly stated by the Federal Circuit in *In re Kotzab*, 55 U.S.P.Q.2D (BNA) 1313, 1316-1317 (Fed. Cir. 2000):

Most if not all inventions arise from a combination of old elements. Thus every element of a claimed invention may often be found in the prior art. *However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention.* Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant. (Emphasis added).

Applicant's amended independent claims 1, 15, 29, and 43 generally recite at least the following limitations: receiving a digital television broadcast signal that includes a data stream having a plurality of data packets...*the data test stream used to determine a service level of a digital television broadcast signal being received on a channel*...determining the service level of the digital television broadcast signal based upon a loss of data packets from the data test stream *wherein determining the service level includes measuring a number of data packets from the data test stream received over a predetermined interval and determining a data packet loss percentage for the data test stream by calculating a ratio of the measured number of data packets received and a number of data packets that should have been received*...and...*displaying the service level*.

Applicant respectfully submits that Anderson does not teach or suggest the limitations for which it is set forth, and particularly, does not teach the claim limitations related to receiving a digital television broadcast signal that includes a data test stream having a plurality of data packets...*the data test stream being used to determine the service level of a digital broadcast signal being received on a channel*. Further, Applicants respectfully submit that Anderson does not teach or suggest *measuring a number of data packets of the data test stream received by the digital television receiver over a predetermined interval that is used to determine a service level that is later displayed*.

In contrast, as set forth in the Abstract of Anderson, Anderson relates to a method and device for monitoring a multi-program data stream...The data stream preferably contains digital packets multiplexed from different data and control channels...A service information channel or

program guide is available from the data stream to identify the various channels and the associated packets in the data stream...The packet stream analyzer verifies the program guide and the contents of the program guide against the packets found in the packet stream...(Abstract, emphasis added).

Thus, Anderson teaches a data stream that contains digital packets multiplexed from different data and control channels...and...identifies various channels and the associated packets in the data stream.

It should be noted that Applicant's amended independent claims generally include limitations directed to a specialized data test stream that is used to determine the service level of a digital television broadcast signal being received on a channel such that the service level for the digital television broadcast signal on that channel can be displayed to a user.

Applicant respectfully submits that Anderson does not teach or suggest *a data test stream used to determine the service level of a digital television broadcast signal being received on a channel*.

In contrast, as set forth in Anderson:

"The present invention enables an operator to monitor a digital multi-program data stream. The status of the multiplexed digital signals may be viewed and errors identified to the operator...Each packet stream is verified and any errors are reported...The data rate of each SCID channel is maintained and displayed...The troubleshooting of faults is aided by the identification of failing channels by SCID number...The equipment associated with a failing SCID can thus be identified and repaired...Accordingly, the packet stream analyzer monitors and verifies the proper packetizing and multiplexing of the packet stream." (Col. 8, lines 33-44, emphasis added).

In fact, table 1 in column 7 of Anderson illustrates a table that may be shown on a computer display that shows a variety of different service channel IDs (SCIDs) found in a packet stream along with each of the corresponding channels to help an operator monitor and verify the proper packetizing and multiplexing of the packet stream across various channels. Applicant cannot locate a teaching or suggestion of an additional specialized data stream for use in determining a service level.

As set forth in Anderson: “The four basic functions of analyzer logic 68, monitor, verify, debug, and statistics are preferably utilized in one of two modes (single transponder monitoring) or scan mode (multiple transponder monitoring).” (Col. 6, lines 58-61).

Applicant respectfully submits that Anderson teaches an analyzer that performs functions such as monitoring, verifying, debugging, and presenting statistics, for multi-program data on multiple channels for a given satellite transponder. Again, Applicant cannot locate a teaching or suggestion of an additional specialized data stream for use in determining a service level.

Applicant respectfully submits that Anderson does not teach or suggest providing a *specialized data test stream that is utilized to determine the service level of a digital television broadcast signal being received on a channel and displaying the determined service level to a user*.

Furthermore, Applicant respectfully submits that there is absolutely no teaching or suggestion in Anderson of *measuring a number of data packets of the data test stream received by the digital television receiver over a predetermined interval that is used to determine a service level that is later displayed*.

Moreover, as the Office Action recognizes, Anderson does not teach or suggest determining a data packet loss percentage value for the data test stream by calculating a ratio of the measured number of data packets received by the digital receiver and a number of data packets that should have been received by the digital receiver. (Office Action, page 3).

In order to, in hindsight, reconstruct Applicant’s claimed invention, the Office Action attempts to combine Anderson with Gussella.

However, there would be no motivation, even if Anderson did teach or suggest the limitations for which it is set forth, to combine Anderson, which works well for its intended purpose, with Gussella to in hindsight recreate the embodiments of Applicant’s claimed invention. Further, as will be described, Applicant respectfully submits that Gussella does not teach or suggest the limitations from which it is set forth.

In contrast, to Anderson, Gussella teaches:

The present invention relates to an admission control scheme for multimedia streams on an integrated network and, more particularly, to a method and apparatus for predicting whether or not to admit multimedia streams on an integrated network. (Col. 1, lines 8-13, emphasis added).

In fact, Gussella states that:

Broadly speaking, the invention relates to a scheme for controlling admission of real-time traffic to a network. The scheme relies on measurement of the actual behavior of traffic sources as well as the performance provided to all existing connections in order to make future admission decisions. More particularly, the admission control scheme, according to the invention, predicts performance parameters that will exist when one or more additional connections are added to the network links. Thereafter, the predicted performance parameters enable the admission control scheme to determine if the network has the resources needed to satisfy the QoS commitments requested by future applications. (Col. 5, lines 27-40, emphasis added).

Thus, Gussella relates to a scheme for controlling admission of real-time traffic to a network.

Gussella does not teach, suggest, or is it even remotely related to: *digital television broadcast signals, digital receivers, data test streams, determining the service level of the digital television broadcast signal being received on a channel, and more particularly, determining a data packet loss percentage value for the data test stream by calculating a ratio of the measured number of data packets received by the digital receiver and a number of data packets that should have been received by the digital receiver.*

Instead, Gussella is related to predicting parameters to enable an admission control scheme to determine if the network has the resources needed to satisfy the QoS commitments requested by future applications.

In fact, the section of Gusella cited by the Office Action (on page 3 of the Office Action), col. 2, lines 45-50 and Figure 5 that allegedly teaches or suggests determining a data packet loss percentage value for the data stream by calculating a ratio of the measured number of data

packets received by the digital receiver and a number of data packets that should have been received by the digital receiver reads in whole:

Applications request performance guarantees by specifying objective values for the QoS parameters defined by the service interface. The QoS parameters supported by the service interface are end-to-end delay and the end-to-end ratio of lost packets to transmitted packets (loss ratio). Those skilled in the art will recognize that the loss ratio could alternatively be measured as the ratio of lost packets to successfully received packets. Other QoS requirements, such as bounds on delay-jitter, may be addressed at the application level rather than at the network level. Bandwidth is not a QoS parameter but rather a source traffic descriptor parameter, which can be expressed by a leaky bucket descriptor. (Col. 8, lines 14-26).

Thus, when read in context, Gussella relates to an application requesting performance guarantees by specifying objective values for QoS parameters in an end-to-end network. Therefore, Gussella relates to network admission based upon application performance requests and based upon QoS parameters.

However, Gussella does not teach or suggest Applicant's claim limitations related to *determining a data packet loss percentage value for a data stream of a digital broadcast signal by calculating a ratio of the measured number of data packets received by the digital receiver and a number of data packets that should have been received by the digital receiver.*

Gussella in no way relates to digital television broadcast signals, digital receivers, and is in fact related to a non-analogous field for admission control schemes for real-time traffic requests in communication networks. Applicant respectfully submits that Gussella is not related to the field of digital television at all.

Lastly, the Office Action attempts to combine Gangitano with Gussella and further in view of Gangitano, which the Office Action alleges teaches displaying a service level based upon a loss of data packets. (Office Action, page 3).

However, Applicant respectfully submits that Anderson does not teach displaying a service level based upon a loss of data packets.

Instead, Gangitano teaches a simple signal strength detector.

As set forth in Gangitano, Gangitano teaches: receiver 14 may include a signal strength detector...signal strength detector is configured to sample the received signal presented from the antenna 12 and determine a relative signal strength...techniques for computing a signal strength are well known in the art and typically involve a computation of a time average measure of the magnitude of the received signal. (Col. 3, lines 9-15, emphasis added).

Thus, Gangitano does not teach or suggest a service level determiner to determine if service level of a signal *based upon a loss of data packets*.

As outlined above in detail, Applicant respectfully submits that neither Anderson, Gussella, or Gangitano, alone or in combination, teach or suggest the limitations of Applicant's amended independent claims 1, 15, 29, and 43. In fact, Gussella is not related at all to the use of DTV broadcast signals to determine a service level.

More particularly, Applicant respectfully submits that Applicant's amended independent claims 1, 15, 29, and 43 are not taught or suggested by Anderson alone, or in combination with, Gussella, and Gangitano. Therefore, Applicant respectfully submits that these claims be allowed and passed to issuance. Further, as to the dependent claims, which are dependent from the allowable based claims, Applicant respectfully requests that these claims be allowed and passed to issuance as well.

Conclusion

In view of the remarks made above, it is respectfully submitted that pending claims 1, 6-15, 20-29, 34-43 and 48-55 define the subject invention over the prior art of record. Thus, Applicant respectfully submits that all the pending claims are in condition for allowance, and such action is earnestly solicited at the earliest possible date. The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application. To the extent necessary, a petition for an extension of time under 37 C.F.R. is hereby made. Please charge any shortage in fees in connection with the filing of this paper, including extension of time fees, to Deposit Account 02-2666 and please credit any excess fees to such account.

Respectfully submitted,

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Dated: 5/25/2006

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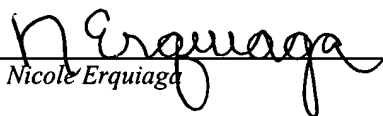
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